7. Conclusions and Implications

As we indicated in Section 3.5, the choice of measurement attributes for financial statement elements should be determined by five considerations: reliability of the measure, relevance of the measure, comparability and consistency with similar financial statement elements, neutrality of the measure, and cost of implementation. In this section, we discuss several of these considerations in light of our research into the measurement of the fair value of property and casualty claim and defense cost liabilities.

Reliability

It is an open question whether the estimation of discounts and market risk margins for property and casualty claim and defense cost liabilities can be sufficiently reliable to support their inclusion in fair value estimates.

- In discounting claim and defense cost liabilities, the key assumption is the pattern of future payments for the claims associated with a single year of coverage. Our analysis supports the need for these assumptions to be entity-specific, so that they reflect the specific characteristics of the business underwritten. Although we used an actuarial technique that was designed to produce stable payment pattern assumptions over time, in several instances we noted an abrupt change in the pattern for a particular company from one year-end to the next. This change is greater than one would expect from the gradual shifts in the make-up of the underlying business. It is likely that, at least in some cases, these abrupt changes are caused by events that require information internal to the company to interpret correctly.

- In measuring the market pricing risk margins, the historical industry data are very volatile — such that the historical average depends heavily on the time period selected. Ultimately judgment will be necessary, as the empirical data are not sufficiently stable to provide definitive indications.

- Our approach assumes that industry-level research would determine the pricing market risk margins, and the market price per unit of risk, to be used by all companies. Each company would then measure the entity-specific amount of reserve risk, and the reserve market risk margin. This approach limits the variation across companies to differences in the method used to measure the amount of reserve risk. In measuring the amount of risk remaining in the claim and defense cost liabilities, the two methods we tested produced different results, implying different risk margins. Presumably other methods could be employed by the companies, adding further to the variation across companies.

- Each method for measuring the amount of reserve risk produced different results over time — differences that we do not believe represent true changes in the underlying level of risk. Unless an approach is developed that is more stable over time, the changes in measured risk from one year to the next will contribute to “noise” in the financial statements. The changes in the level of measured risk over time were present to some degree for all companies and all three products; while these might not be material in many cases, several company groups exhibited abrupt changes in the measured amount of risk, creating potentially significant noise in their income statements for that year.
Again, some of the abrupt changes that we observed may be caused by issues with the data that we employed.

- Ultimately, the amount of variation on company practices is a function of the way fair value is implemented. While we used a single measure of the market price per unit of risk for each product across all companies, this determination could be left to individual companies. This would increase the variation in market risk margins across companies. Moving in the opposite direction, both the market price of risk and the method for measuring the amount of reserve risk could be prescribed for all companies, narrowing the variation.

Clearly, further research and refinement in the approaches to measuring these elements of fair value will be needed. Our work is only a start. To achieve consistency, consideration should be given to some level of standardization in the implementation of fair value.

A clear goal of fair value is to move the financial reporting associated with all financial instruments closer to market values, in the belief that this will result in financial statement elements that are more representationally faithful. The net effect will be financial statements that are closer to underlying economic reality, increasing their transparency. However, as our analysis indicates, claim and defense cost liabilities are subject to considerable uncertainty, with significant potential for errors in their estimation. These errors have historically created significant distortions in the reported financial results of property and casualty insurers — causing significant disparities between reported income and economic income. This point is particularly relevant when one considers that claim and defense cost liabilities are typically a multiple of annual revenue, such that any errors in the estimation of the liabilities are leveraged.

To measure the degree to which a change to fair value will move the reported results closer to the underlying economic reality, we measured the correlation between reported operating income (as measured by the operating ratio — the ratio of total income from insurance operations to premium) and the economic margins we developed in our assessment of pricing risk. The latter is a measure of the actual economic profit achieved on the coverage provided during each period. The former is an accounting representation of that profit, reflecting estimates of the policy liabilities. We first measured the correlation between reported income under U.S. GAAP (under the matched investment strategy) and the economic margins; then we measured the correlation between reported income under fair value and the economic margins. In each case we measured the correlations across all 11 years of income and all 20 companies.

The results are summarized in Exhibit 7.1.1 below. The first point to be noted is the low correlations between the U.S. GAAP operating ratios and the economic margins. Correlations are just 55% for Personal Auto Liability; they are below 50% for the other two products, especially Medical Professional Liability. These low correlations are largely a consequence of the substantial distorting effect of the errors in estimation of the claim and defense cost liabilities on reported income for each of the three products.
The second point to be noted is that the correlations between the fair value operating ratios and the economic margins are not materially better than those relating to U.S. GAAP. While discounting the liabilities in a manner that is consistent with the investment strategy should improve the correlations, this improvement is marginal. Putting the estimated liabilities on an economic basis does not address the more fundamental issue of errors in the estimates themselves. In addition, the theoretical gains from fair value are partially offset by additional noise created by changing payment patterns and measured amounts of reserve risk from one year to the next.

This analysis suggests that, from an income statement perspective, the implementation of fair value may not move reported results materially closer to economic reality.

Stating the issue somewhat differently, some might argue that there is little value in refining the estimates of claim and defense cost liabilities to incorporate discounts and risk margins when the basic estimates of the nominal liabilities are subject to so much uncertainty.

Notwithstanding these measurement issues, our analysis demonstrates that practical methods can be developed and employed to estimate these liabilities on a fair value basis.
Relevance
Our analysis also demonstrates that the preparation of fair value estimates is complex, and it will take considerable education of actuaries and others — both to develop the estimates and to use them. The current use of nominal estimates has a substantial advantage over fair value, in that nominal estimates are easy to understand.

Fair value is not currently adopted anywhere in the world. Property and casualty insurance companies do not produce financial statements oriented to fair value, nor do external audiences (e.g., regulators, investors) think in “fair value” terms. How quickly and easily this measure would become relevant to both internal and external users is a point of current debate.

Cost
The additional analysis and assumptions required to support fair value estimates will require a substantial investment by preparers of financial statements. While our work demonstrates that the data and methods necessary to perform the calculations can be developed, there will need to be significant further research and development prior to implementation. In addition, the data that we used were not perfectly suited to the task. For example we used some data that were net of reinsurance, where direct data would be more appropriate. In some areas, additional history for the time-series data would also be desirable. Further investment, to develop the data and refine the methodologies, will need to occur prior to implementation.

The fair value calculations are complex, and will require that informed judgments be made at several critical juncture points. Preparation of fair value estimates for property and casualty insurance liabilities will therefore require the ongoing use of trained experts.

From our analysis, it is not clear that sufficient benefits will be derived from fair value to support these costs.